Product Specification

24-Port 100/1000 SFP with 8 Shared TP
Managed Stackable Switch

SGSW-24240 / SGSW-24240R

Version 1.0

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Change History:

Revision:	Date:	Author:	Change List
Version 1.0	2009/4/20	Kent Kang	Initial Release

Author:	Kent Kang	**Editor:**	Kent Kang
Reviewed By:	Tom Shih	**Approved By:**	Tom Shih

1. PRODUCT DESCRIPTION

High-Density, Resilient Deployment Switch solution for Growing Gigabit Networking of Enterprise, Campus and Data Center

For the growing Gigabit network demand, PLANET provides new generation Stackable Gigabit Switch solution, SGSW-24040 series Switch to fulfill the need of large scale of network deployment in the enterprises, Telecoms or campus. The new SGSW-24040 series Switch member, the SGSW-24240 and the SGSW-24240R, is the Layer 2 Managed Stackable Gigabit Switch which provides 24 dual-speed SFP slots, 8 shared 10/100/1000Base-T copper ports, and 2 dedicated High-Speed HDMI-like interfaces for stacking with the series of switches.

Up to 16 units, 384 Gigabit Ethernet ports can be managed by a stacking group and you can add ports and functionality as needed. The 2 built-in stacking ports providing 5Gbps bandwidth and up to 20Gbps Bi-directional speed, it can handle extremely large amounts of data in a secure topology linking for backbone or high capacity network server with 68Gbps switching fabric per unit. The stacking technology also enables the chassis-based switches to be integrated into SGSW-24240 series Managed Switch but without the expensive up-front cost.

High Reliability Stacking Management

The SGSW-24240 series applies the advantage of stackable technology to manage the stack group with one single IP address, which helps network managers to easily manage a stack of switches instead of connecting and setting each unit one by one. Through its high bandwidth tunnel and stacking technology, the SGSW-24240 series gives the enterprises, service providers and Telecoms flexible control over port density, uplinks and switch stack performance. Stack redundancy of the SGSW-24040 series ensures data integrity be retained even if one switch in the stack fails. You can even hot-swap switches without disrupting the network, which greatly simplifies the tasks of upgrading the LAN for catering to increasing bandwidth demands.

2. PRODUCT FEATURES

- **Physical Port**
  - ☐ **24 100/1000Base-X mini-GBIC/SFP slots**
  - ☐ **8-Port 10/100/1000Base-T** RJ-45 copper, shared with Port-1 to Port-8.
  - ☐ **2 HDMI-like 5GbE** Stacking interfaces
  - ☐ **RS-232 DB9** console interface for Switch basic management and setup

- **Stacking**
  - ☐ Hardware stack up to 16 units and 384 Gigabit ports
  - ☐ Single IP address stack management
  - ☐ Stacking architecture supports Chain and Ring mode
  - ☐ Plug and Play connectivity
  - ☐ Mirror across stack
  - ☐ Link Aggregation groups spanning multiple switches in a stack
  - ☐ Hardware learning with MAC table synchronization across stack

- **Layer 2 Features**
  - ☐ Complies with the IEEE 802.3, IEEE 802.3u, IEEE 802.3ab, IEEE 802.3z Gigabit Ethernet standard
  - ☐ Supports Auto-negotiation and half duplex/full duplex modes for all 10Base-T/100Base-TX and 1000Base-T ports.
  - ☐ Auto-MDI/MDI-X detection for each RJ-45 port
  - ☐ Prevents packet loss with back pressure (Half-Duplex) and IEEE 802.3x PAUSE frame flow control (Full-Duplex)
  - ☐ High performance of Store-and-Forward architecture, broadcast storm control and runt/CRC filtering eliminates erroneous packets to optimize the network bandwidth
  - ☐ 8K MAC address table, automatic source address learning and ageing
  - ☐ 1392Kbytes embedded memory for packet buffers
  - ☐ Support VLAN
    - IEEE 802.1Q Tagged VLAN
    - Up to 255 VLANs groups, out of 4041 VLAN IDs
    - Provider Bridging (VLAN Q-in-Q) support (IEEE 802.1ad)
    - Private VLAN Edge (PVE)
  - ☐ Support Spanning Tree Protocol
    - STP, IEEE 802.1d (Spanning Tree Protocol)
    - RSTP, IEEE 802.1w (Rapid Spanning Tree Protocol)
  - ☐ Support Link Aggregation
    - 802.3ad Link Aggregation Control Protocol (LACP)
    - Cisco ether-channel (Static Trunk)
    - Maximum 12 trunk groups, up to 16 ports per trunk group

- Up to 32Gbps bandwidth(Duplex Mode)

☐ Provide Port Mirror (many-to-1)

☐ Port Mirroring to monitor the incoming or outgoing traffic on a particular port

➢ **Quality of Service**

☐ 4 priority queues on all switch ports.

☐ Supports for strict priority and weighted round robin (WRR) CoS policies

☐ Ingress Shaper and Egress Rate Limit per port bandwidth control

☐ Traffic-policing policies based on application

➢ **Multicast**

☐ Supports IGMP Snooping v1, v2 and v3

☐ Querier mode support

➢ **Security**

☐ IEEE 802.1x Port-Based network access authentication

☐ MAC-Based network access authentication

☐ IP-Based Access Control List (ACL)

☐ MAC-Based Access Control List

☐ Static MAC

➢ **Management**

☐ WEB-based, Telnet, Console Command Line management

☐ Accesses through SNMPv1, v2c and v3 security set and get requests.

☐ Built-in Trivial File Transfer Protocol (TFTP) client

☐ BOOTP and DHCP for IP address assignment

☐ Firmware upload/download via HTTP / TFTP

☐ SNTP (Simple Network Time Protocol)

☐ LLDP Protocol

☐ PLANET Smart Discovery Utility for deploy management

➢ **Redundant Power System**

☐ 100~240V AC / -48V DC Dual power redundant

☐ Active-active redundant power failure protection

☐ Backup of catastrophic power failure on one supply

3. PRODUCT SPECIFICATION

3.1 MAIN COMPONENT

Switch ASIC:	VITESSE VSC7407	X1
Giga PHY:	VITESSE VSC8658	X3
CPU:	ARM926EJ (integrated with VSC7405)	x 1
Flash:	MX29LV128DBT2C (16Mbytes)	x 1
DDR RAM:	Elpida D5116ADTA (64Mbytes / 512Mbits)	x 1
SRAM:	IDT71V124SA15TYG (128Kbytes / 1Mbits)	
Open frame power supply:	12V / 5A	x1

3.2 FUNCTION SPECIFICATION

Product	SGSW-24240	SGSW-24240R
Hardware Specification		
Copper Ports	8 10/ 100/1000Base-T RJ-45 Auto-MDI/MDI-X ports, shared with Port-1 to Port-8	
SFP/mini-GBIC Slots	24 SFP interfaces, 1000Base-SX/LX and 100Base-FX SFP transceiver compatible	
Switch Processing Scheme	Store-and-Forward	
Switch Fabric	68Gbps	
Address Table	8K entries	
Share data Buffer	1392 kilobytes	
Flow Control	IEEE 802.3x Pause Frame for Full-Duplex Back pressure for Half-Duplex	
Jumbo Frame	10Kbytes	
LED	System: Power, Master Ports: 10/100/1000 Link/Act , SFP Link, Stack Port Link	
Stacking		
Stacking Ports	Two 5Gbps HDMI-Like interface	
Stacking Numbers	16	
Stacking Bandwidth	10Gbps (Full-Duplex)	
Stack ID Display	7-Segment LED Display (1~9, A~F,0)	
Stack Topology	Ring / Chain / Back-to-Back stack	

Layer 2 function	
System Configuration	Console, Telnet, Web Browser, SNMPv1, v2c and v3
Port configuration	Port disable/enable. Auto-negotiation 10/100/1000Mbps full and half duplex mode selection. Flow Control disable / enable. Bandwidth control on each port.
Port Status	Display each port's speed duplex mode, link status, Flow control status. Auto negotiation status, trunk status.
VLAN	802.1Q Tagged Based VLAN ,up to 255 VLAN groups Q-in-Q Private VLAN
Port trunking	IEEE 802.3ad LACP / Static Trunk Support 12 groups of 16-Port trunk support
QoS	Traffic classification based, Strict priority and WRR 4-level priority for switching - Port Number - 802.1p priority - DSCP/TOS field in IP Packet
IGMP Snooping	IGMP (v1/v2) Snooping, up to 8K multicast Groups IGMP Querier mode support
Access Control List	IP-Based ACL / MAC-Based ACL Up to 256 entries
SNMP MIBs	RFC-1213 MIB-II IF-MIB RFC-1493 Bridge MIB RFC-1643 Ethernet MIB RFC-2863 Interface MIB RFC-2665 Ether-Like MIB RFC-2737 Entity MIB RFC-2618 RADIUS Client MIB RFC-2933 IGMP-STD-MIB RFC3411 SNMP-Frameworks-MIB IEEE802.1X PAE LLDP MAU-MIB
Standards Conformance	
Regulation Compliance	FCC Part 15 Class A, CE
Standards Compliance	IEEE 802.3 10Base-T IEEE 802.3u 100Base-TX/100BASE-FX IEEE 802.3z Gigabit SX/LX IEEE 802.3ab Gigabit 1000T

	IEEE 802.3x Flow Control and Back pressure IEEE 802.3ad Port trunk with LACP IEEE 802.1d Spanning tree protocol IEEE 802.1w Rapid spanning tree protocol IEEE 802.1p Class of service IEEE 802.1Q VLAN Tagging IEEE 802.1x Port Authentication Network Control IEEE 802.1ab LLDP

3.3 PHYSICAL SPECIFICATIONS:

Dimensions:

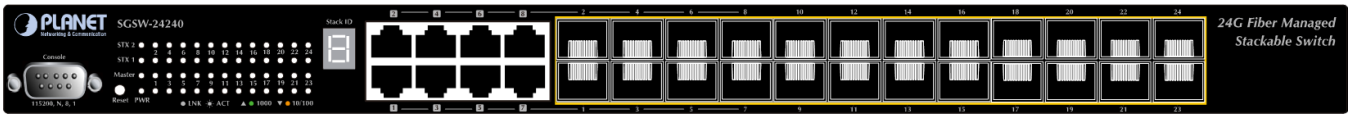
440 x 200 x 44.5mm (W x D x H), 1U height

Weight:

SGSW-24240 : 3.0kg

SGSW-24240R: 3.1kg

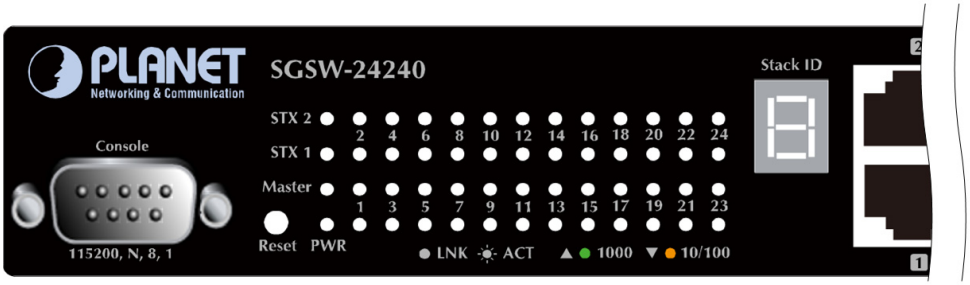
■ **Front Panel:**



■ **Rear Panel- SGSW-24240:**

■ **Rear Panel- SGSW-24240R:**

■ **LED definition**



SGSW-24240 / SGSW-24240R LED panel

■ System

LED	Color	Function
PWR	Green	**Lights** to indicate that the Switch has power.
Master	Green	**Lights** to indicate that the Switch is the Master of the stack group
STX1	Green	**Lights** to indicate the stacking link through that port is successfully established.
STX2	Green	**Lights** to indicate the stacking link through that port is successfully established.

■ 10/100/1000Base-T interfaces (Shared Port-1~Port-8)

LED	Color	Function
1000 LNK/ACT	Green	**Lights:** To indicate the link through that port is successfully established with speed **1000Mbps**
		Blink: To indicate that the switch is actively sending or receiving data over that port.
		Off: If L10/100 NK/ACT LED light-> indicate that the port is operating at 10Mbps or 100Mbps If LNK/ACT LED Off -> indicate that the port is link down
10/100 LNK/ACT	Orange	**Lights:** To indicate the link through that port is successfully established with speed 10Mbps or 100Mbps
		Blink: To indicate that the switch is actively sending or receiving data over that port.
		Off: If 1000 LNK/ACT LED light-> indicate that the port is operating at 1000Mbps If 1000 LNK/ACT LED Off -> indicate that the port is link down

■ 100 / 1000Base-X SFP interfaces

LED	Color	Function
1000 LNK	Green	**Lights:** To indicate the link through that SFP port is successfully established with speed **1000Mbps**
		Off: To indicate that the SFP port is link down
100 LNK/ACT	Orange	**Lights:** To indicate the link through that port is successfully established with speed 100Mbps
		Blink: To indicate that the switch is actively sending or receiving data over that port.
		Off: If 1000 LNK/ACT LED light-> indicate that the port is operating at 1000Mbps If 1000 LNK/ACT LED Off -> indicate that the port is link down

■ **7-Segment LED Display**

Stack ID (1~9, A~F, 0): To indicate the **Switch ID** of each SGSW Managed Switch. Switch IDs are used to uniquely identify the Managed Switches within a stack. The Switch ID of each Managed Switch is shown on the display on the front of the Managed Switch and is used widely in the web pages as well as in the CLI commands of the Stack group.

Stack ID	1	2	3	4	5	6	7	8	9	A.	B.	C.	D.	E.	F.	0
Switch ID	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

3.4 ENVIRONMENTAL SPECIFICATION

Operating:

Temperature: 0°C ~ 50 degree C

Relative Humidity: 20% ~ 95% (non-condensing)

Storage:

Temperature: -40°C ~ 70 degree C

Relative Humidity: 20% ~ 95% (non-condensing)

3.5 ELECTRICAL SPECIFICATION

	SGSW-24240	SGSW-24240R
AC / DC dual power supplies :	--	Supports Power Redundant
AC Power Input Voltage:	100 ~ 240VAC, 50 / 60Hz, Auto-sensing.	100 ~ 240VAC, 50 / 60Hz, Auto-sensing.
DC Power Input Voltage:	--	-48V DC @ 0.6A
		Range: -30V~ -60V
Power Consumption(System on):	110V: **15.5** Watts	110V: **15.5** Watts
	220V: **16** Watts	220V: **16** Watts
Power Consumption(Full Load):	110V: **46** Watts	110V: **46.5** Watts
	220V: **45.5** Watts	220V: **45** Watts

3.6 REGULATORY COMPLIANCE

FCC Class A, CE.

3.7 REALIABILITY

MTBF > 50,000 hrs @ 25 Degree C

3.8 BASIC PACKAGING

- SGSW-24240 / SGSW-24240R Switch X1
- User's manual X1
- Quick Installation Guide X1
- Power Cord X1
- RS232 cable X1
- CB-STX50 – 50cm 5GbE Stacking Cable X1
- Rubber fee X4
- Two rack-mounting brackets with attachment screws X2

* Optional Accessory: CB-STX200 – 200cm 5GbE Stacking Cable

3.9 PACKING DIMENSION

Dimension: 580mm (W) x 510mm (D) x 330mm (H)

Weight: 18.98kg (Gross Weight)

5 pcs in one carton